

### **Abstract**

The present invention relates generally to kits that provide reagent mixes and instructions for the use thereof, in performing high-throughput assay methods that determine the proliferative status of isolated target cell populations. The methods  
5 measure the luminescent output derived from the intracellular ATP content of incubated target cells, and correlate the luminescence with the proliferative status of the cells. The present invention further relates to kits that provide reagent mixes and instructions for high-throughput assays methods for screening compounds that may modulate the proliferative status of a target cell population. The kits of the present  
10 invention and methods therein described may be used for determining the proliferative status of any isolated cell line or type. The kits and methods of the present invention address the need for rapid assays that determine the proliferative status of isolated hematopoietic stem and progenitor cells and of subpopulations of differentiated cells thereof.

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